

ABSTRACT OF THE DISCLOSURE

In an optical microscope, a pair of convergence/collimation lenses are arranged on the common optical axis of a light beam directed toward a sample being observed through an objective lens, the light beam being radiated or reflected from the sample to pass through the objective lens reversely. The phase of the transmitting light beam is varied within a specified range between these lenses so that the sample is irradiated while being focused at a depth corresponding to the phase at the wave front of the light beam entering the objective lens.